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ABSTRACT

The monograph describes the characteristics of high-potential handicapped pupils, and explains how these children can be identified and served within Virginia's educational "Standards of Quality." Emphasis is on finding and nurturing students' strengths. After an introductory discussion of the importance of identifying and serving the gifted handicapped, the first section provides definitions of giftedness and handicapping conditions. Typical student characteristics (including positive characteristics appearing as negative traits) are considered next. A chapter on identification of gifted handicapped students covers identification problems, potential solutions to identification problems, and selection and placement. The chapter on programming considers general principles, academic programming, remedial instruction, adaptive instruction, programming to enhance self-concept, developing a social self-concept, and the effects of administrative arrangements on self-concept. Staff development and community involvement are discussed, including teacher training, the role of the counselor, peer education, community efforts, and parental involvement. The final section looks at research needs concerning the gifted handicapped. Ten tables summarize characteristics, suggestions, and ideas. Includes approximately 175 references. (DB)

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Gifted Handicapped Students: The Way Forward

1990

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GIFTED HANDICAPPED STUDENTS:

THE WAY FORWARD

Programs for the Gifted
Virginia Department of Education
P.O. Box 6-Q
Richmond, Virginia 23216

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PREFACE

Gifted Handicapped Students: The Way Forward describes the characteristics of high-potential handicapped pupils, and explains how these children can be identified and served. While the monograph deals at some length with the educational treatment of these youngsters' weaknesses, emphasis is placed mostly on finding and nurturing these students' strengths.

Readers of this document initially should be aware of four points:

1. It is quite possible for a child simultaneously to be gifted and handicapped.
2. This monograph, addressed to the needs of the child who exhibits both of these types of exceptionalities, builds on conceptual roots which are found in previous educational documents published by the Commonwealth of Virginia.
3. The present report is much more explicit than previous Commonwealth documents in commenting on the gifted handicapped.
4. Despite this report's increased efforts toward specificity about these students, its intentions still are general in nature.

It is useful to explore these statements individually:

1. It is quite possible for a child simultaneously to be gifted and handicapped.

   While the terms "gifted" and "handicapped" may seem like diametrically opposed terms to some people, they are not necessarily opposites at all. Gifted children and handicapped children long have shared identities as

"outsiders" in their school systems, with both groups exhibiting traits which placed them far from the norm. The common bond of "differentness" that connects gifted and handicapped youth has been acknowledged officially by state governments. As recently as a decade ago, in fact, 27 states included giftedness under their definitions for "exceptional children," "special-needs pupils," or even "handicapped students" (Zettel, 1979).

The overlapping of giftedness and handicapping conditions is seen most obviously in the estimated hundreds of thousands of children in our nation's schools who meet the official criteria for both types of exceptionalities (Davis & Rimm, 1985). It is these pupils, who now go underidentified and misunderstood, who are the focus of this report.

2. This monograph, addressed to the needs of the child who exhibits both types of exceptionalities, builds on conceptual roots which are found in previous educational documents published by the Commonwealth of Virginia.

The present report is not Virginia's first official educational document to express implied or overt concern for the gifted handicapped. The Commonwealth's previously published Standards of Quality (contained in Virginia School Laws: 1987 Cumulative Supplement) and Virginia Plan for the Gifted (1984) suggest the need to "go the extra mile" and serve **all** segments of the gifted population, not just those who are easy to serve. The gifted handicapped would seem to be one such difficult-to-serve

population that is implicitly addressed in the aforementioned documents' statements on gifted identification and programming. With regard to pupil identification, for example, Standard 5 of the Standards of Quality broadly urges each school division to "conduct a program acceptable to the Board of Education for the early identification of gifted and talented students" (Virginia School Laws: 1987 Supplement, p. 31). Concerning gifted programming, Standard 5 just as comprehensively asks each school division to "offer differentiated instructional opportunities in accordance with guidelines of the Board of Education for identified gifted and talented students" (1987 Supplement, p. 31). The Virginia Plan for the Gifted (1984) goes a step further than the Standards of Quality by implying the need to offer adapted gifted instruction to high-ability students with pronounced weaknesses in some areas and definite strengths in others (p. 1): "Programs for the gifted must be based on the performance and learning styles of each student. Such programs should exist in all phases of the curriculum so that students will have the opportunity to pursue programs of study suitable to their needs."

3. The present monograph is much more explicit than previous Commonwealth documents in commenting on the gifted handicapped.

In spite of the promising theoretical foundations laid by previous reports, Virginia has not provided until now a comprehensive statement on how to identify and teach the gifted handicapped as a distinctive student population. The present document attempts to fill this void. Specifically, this report explains:

- the importance of identifying and serving the gifted handicapped
- the distinguishing traits of these students
- viable methods for identifying these pupils
- ways of improving these youngsters' academic performance and self-concept
- approaches that can build better relationships between these children and significant others, including:
  -- teachers
  -- counselors
  -- peers
  -- members of the community
  -- parents
- current research needs regarding the education of these students.

4. Despite this report's increased efforts toward specificity regarding these students, its intentions still are general in nature.

While the monograph makes a concerted effort to provide the reader with new information about gifted handicapped students, it nevertheless maintains a tone of generality. The report's generality can be seen in four ways. First of all, the report offers literature-backed generalizations about gifted handicapped children as a group. These generalizations are derived from the literature broadly applicable to gifted handicapped children, and from readings specifically applicable to multiple gifted-handicapped subpopulations. Second, the document contains many "mays" and "perhapses" concerning high-potential handicapped pupils.

This tentativeness (i.e., generality of language) is due to the striking dearth of experimental studies on gifted handicapped children, and the still meager body of expert opinion and descriptive accounts on these youngsters. (Descriptive accounts on the gifted handicapped sometimes **do** provide statistical data, but much more often consist simply of clinicians' reports, educators' case studies, or autobiographical case histories.) Third, the document deals with a great variety of topics in brief fashion. And fourth, the monograph is addressed to a broad audience--teachers of the gifted and handicapped, regular-classroom educators, and school administrators.

The monograph's tone of generality is exemplified by its treatment of various identification and programming approaches. Just the general nature of these approaches is described, in an effort to point educators in a helpful initial direction.

Readers desiring greater specificity than is provided in this monograph are asked to consult the paper's list of references. These references will lead readers to a wealth of additional information about various kinds of gifted handicapped pupils and how to assist them.

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GIFTED HANDICAPPED STUDENTS: THE WAY FORWARD

IMPORTANCE OF IDENTIFYING AND SERVING THE GIFTED HANDICAPPED

The gifted handicapped (also termed "high-potential handicapped" in this monograph) are attracting increasing recognition as a distinct student subpopulation, a pupil group that exhibits a unique blend of strengths and weaknesses (Porter, 1982). In decades past, the weaknesses of this subpopulation often went unidentified and its strengths even more frequently remained unaddressed (Gerken, 1979). In the late 1980s, America's estimated 300,000 to 450,000 gifted handicapped school children unfortunately are still without appropriate educational identification and programming efforts (Davis & Rimm, 1985; Whitmore & Maker, 1985). The last ten years, however, have seen three trends marking the growth of educational interest in this group.

First, educators and the public are granting increasing respect to handicapped persons who attain success. Teachers and society are continuing the long tradition of honoring very prominent historical figures who were simultaneously gifted and handicapped, figures who include Ludwig von Beethoven, Thomas Edison, Albert Einstein, Helen Keller, Franklin Roosevelt, Vincent van Gogh, and numerous others (Baker, 1970; Elkind, 1973; Hickok, 1958; Karnes, Shwedel, & Lewis, 1983; Patten, 1973; Thompson, 1971). Educators and the public also are lauding well-known contemporary gifted-handicapped persons, including musician Ray

Charles, physically-disabled violinist Itzhak Perlman, and stutterer and television host Jack Paar (Davis & Rimm, 1985). Above and beyond these "stars," educators are realizing that there may be many adults in contemporary society who have overcome barriers to become high achievers. Goertzel and Goertzel (1962), for example, found that approximately one-fourth of their 400 high-achieving subjects showed evidence of handicaps at some point in their lives.

Second, educators' growing awareness about bright handicapped persons who have attained success is accompanied in some cases by another realization--that many gifted handicapped children perform far below their potential in school settings (Whitmore & Maker, 1985). Some of these children are underserved because educators do not perceive and address the substantial differences between gifted-handicapped and regular-classroom students. The high-potential of some handicapped pupils often goes unnoticed because they display minimally-acceptable performance (Senf, 1983). When gifted handicapped youngsters do attract attention, their problems may be misdiagnosed and they may be served inappropriately (D. Brown, 1983).

Third, some education scholars already are beginning to direct specific attention toward improving identification and programming efforts for the often-misunderstood gifted handicapped. In the early 1970s, a branch of the Council for Exceptional Children (the major professional organization for

special education in the United States) formed a committee concerned with the well-being of these pupils (Whitmore & Maker, 1985). Since then, there have been various national meetings held concerning these students (see Kent State University College of Education, 1988, and West Virginia Association for the Gifted and Division for Learning Disabilities, 1988). And recently, Whitmore and Maker (1985) produced a comprehensive volume of case studies that suggests characteristics of various high-potential handicapped subgroups, along with identification and programming approaches which might benefit the gifted handicapped.

DEFINITIONS

Before discussing at length the characteristics of the increasingly discussed gifted handicapped population, and the appropriate means of identifying and educating this group, it is necessary to formally define giftedness and the various handicapping conditions which this population might exhibit.

According to the Commonwealth of Virginia's definitions, gifted handicapped pupils must fit into at least one gifted and one handicapped category, as indicated in Table 1.

TABLE 1 *CATEGORIES OF GIFTEDNESS AND HANDICAPPING CONDITIONS*

Potential Areas of Giftedness	*Potential Handicapping Conditions*
General Intellectual Ability	*Autism*
Specific Academic Ability	*Deaf*
Visual and/or Performing Arts Ability	*Deaf-Blind*
Practical Arts Ability	*Developmentally Delayed*
Psychosocial Ability	*Multihandicapped*
Creative and Productive Thinking Ability	*Orthopedically impaired*
	Other Health Impaired
	Hard of Hearing
	Seriously Emotionally Disturbed
	Specific Learning Disability
	Speech or Language Impaired
	Visually Impaired

Giftedness

Definitions varying in stringency have been proposed for delimiting the gifted population. Terman and his colleagues (1925, 1930, 1947) saw giftedness as a very infrequent phenomenon, labeling as "gifted" those individuals who exhibited extremely high tested intelligence (the top 1%).

On the other end of the theoretical spectrum, Feldman (1979) proclaimed that all children are "gifted," if not in intelligence, then in one of a multitude of ways.

Most recent federal and state definitions have delineated a population that is somewhere in size between Terman's and Feldman's (Gallagher & Weiss, 1979; Karnes & Collins, 1978; Public Law 95-561, 1978; Wells, 1982). The federal government's definition, for instance, lists six ways in which a bright child may excel. This definition (cited by Gallagher & Weiss, 1979, p. 3) states that:

> Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and services beyond those normally provided by the regular program in order to realize their contribution to self and society.
>
> Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas:
>
> 1. General intellectual ability;
> 2. Specific academic aptitude;
> 3. Creative or productive thinking;
> 4. Leadership ability;
> 5. Visual and performing arts;
> 6. Psychomotor ability.

The Virginia definition of giftedness, described in the Commonwealth's Plan for the Gifted (1984), is comparable to the federal version in that it outlines a handful of categories of giftedness. The Virginia definition diverges from its federal counterpart in three important respects, however. First, the

Commonwealth's definition does not contain the category of psychomotor ability (an area that the federal government also omits from funding consideration). Second, the Virginia definition does contain a clause not found in the federal version--one citing the practical arts as an area of giftedness (particularly the practical arts pursued in vocational education). Additionally, the Virginia definition appears to rename the federal category of leadership as "psychosocial ability," although the Commonwealth includes under the latter title not only children's leadership skills but also their sensitivity to other youngsters' needs.

Virginia's six categories of giftedness are explicitly defined as follows in the Commonwealth's Plan for the Gifted (1984, pp. 3-4):

1. General Intellectual Ability: Students with advanced general and/or specific information and an advanced aptitude for abstract reasoning and conceptualization, whose mental development is accelerated to the extent that they need and can profit from specifically planned educational services differentiated from those generally provided by the regular program experience.

2. Specific Academic Ability: Students who have aptitude in a specific area such as language arts or math, and who are consistently superior to the extent that they need and can profit from specially planned educational services differentiated from those generally provided by the regular program experience.

3. Visual and/or Performing Arts Ability: Students who excel consistently in the development of a product or performance in any of the visual and/or performing arts to the extent that they need and can profit from specifically planned educational services differentiated from those generally provided by the regular program experience.

4. Practical Arts Ability: Students who excel consistently in the development of a product or performance in any area of vocational education to the extent that they need and can profit from specifically planned educational services differentiated from those generally provided by the regular program experience.

5. Psychosocial Ability: Students who exhibit keen sensitivity to the needs of others and who not only assume leadership roles, but also are accepted by others as leaders to the extent that they need and can profit from specifically planned educational services differentiated from those generally provided by the regular classroom experience.

6. Creative and Productive Thinking Ability: Students who exhibit advanced insights, outstanding imagination, and innovation and who consistently engage in integrating seemingly unrelated information to formulate new and positive solutions to conventional tasks. Creativity refers to the students' ability to produce both tangible and intangible end products involving the use of divergent and convergent thinking and problem solving to the extent that they need and can profit from specially planned educational services differentiated from those generally provided by the regular program experience.

Handicapping Conditions

As with the term "giftedness," there are various definitional categories in Virginia for the label "handicapped." Gifted handicapped children in the Commonwealth may have any one of the following official labels:

- autism
- deaf
- deaf-blind
- hard of hearing
- multihandicapped
- orthopedically impaired
- other health impaired
- developmentally delayed
- seriously emotionally disturbed
- specific learning disability
- speech or language impaired
- visually impaired

These terms are similar to the labels employed by the federal government, except for autism, which is subsumed under the federal label "seriously emotionally disturbed." Indeed the Virginia Department of Education's definitions of these terms are almost exactly the same as the federal definitions, except for minor grammatical adjustments (Federal Register, August 23, 1977, pp. 42478-42479; Regulations Governing Special Education Programs for Handicapped Children and Youth in Virginia, September 1984, pp. 8-14). According to Virginia law (Regulations, pp. 9-13):

"Autism" means a behaviorally defined syndrome; the essential features are typically manifested prior to 30 months of age and include disturbances of:

1. developmental rates and/or sequences;
2. responses to sensory stimuli;
3. speech, language, and cognitive capacities and capacities to relate to people, events, and objects.

"Deaf" means a hearing impairment which is so severe that a child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

"Deaf-blind" means concomitant hearing and visual impairments the combination of which causes severe communication and other developmental and educational problems so that they cannot be

accommodated in special education programs solely for deaf or blind children.

"Hard of Hearing" means a hearing impairment, whether permanent or fluctuating, that adversely affects a child's educational performance, but which is not included under the definition of "deaf."

"Multihandicapped" means concomitant impairments, the combination of which causes such serious educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children.

"Orthopedically impaired" means a severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures).

"Other health impaired"" means having limited strength, vitality or alertness, due to chronic or acute health problems such as heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes which adversely affects a child's educational performance.

"Seriously emotionally disturbed" means:

1) a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affect educational performance:

   (a) an inability to learn what cannot be explained by intellectual, sensory, or health factors;
   (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
   (c) inappropriate types of behavior or feelings under normal circumstances;
   (d) a general pervasive mood of unhappiness or depression; or
   (e) a tendency to develop physical symptoms or fears associated with personal or school problems.

2) The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.

"Specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of

emotional disturbance, or of environmental, cultural, or economic disadvantage.

"Speech and language impaired" means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance.

"Visually handicapped" means a visual impairment which, even with correction, adversely affects a child's educational performance. The term includes both partially seeing and blind children.

CHARACTERISTICS

The student who fits the aforementioned definitions of giftedness and one or more handicapping conditions generally shows a variety of traits. These characteristics can be divided into three groups, according to the ways that they are perceived by adult caretakers:

1) traits that are widely acknowledged as "negative;"
2) characteristics that are widely regarded as "positive;"
3) "positive" qualities that are interpreted as "negative."

Negative Traits

Whitmore and Maker (1985) describe a core of negative characteristics exhibited by gifted handicapped pupils. These students' most common negative traits include:

- a fragile self-concept (and a constant, concomitant struggle for self-acceptance);
- academic difficulties (shown in some but not all skill areas);
- intense frustration over subpar performance;
- interpersonal problems;
- a need to release pent-up energy.

In some high-potential handicapped children, this core list of negative characteristics is supplemented by additional problematic traits in academics and interpersonal relationships. Low rates of achievement may

become evident in some parts of the elementary-school curriculum, especially among the visually handicapped (Bateman, 1963; Caton, 1981) and hearing impaired (Jensema, 1975). Gifted handicapped youngsters may be quite aware that their level of understanding exceeds their level of achievement in some subjects, but are unable to grasp why this underachievement occurs (Whitmore, Maker, & Knott, 1985). Persistent tension, sometimes related to self-approbation over failures and to guilt over using shortcuts, may mark their behavior in weak subjects (Whitmore, Maker, & Knott). And older gifted pupils with handicaps, desiring to be self-sufficient now and in the future, may worry intensely about how they will be able to start a family and career responsibilities (Winter & DeSimone, 1983).

High-potential handicapped students may begin to display a range of emotional problems as they grow older (Schiff, Kaufman, & Kaufman, 1981). They may drift into a social isolation, one marked by either aggressive or withdrawn behavior (Meisgeier, Meisgeier, & Werblo, 1978; Whitmore, 1980). Continual failure in interpersonal relationships may lead to a sense of helplessness and hopelessness (Seligman, 1975). Eventually, dejected gifted handicapped students may choose to sidestep even minimal academic and social risks, because these risks just involve them further in their painful, pervasive world of school problems (Meisgeier et al.).

Positive Traits

Along with negative characteristics, Whitmore and Maker (1985) suggest a number of praiseworthy factors that are associated with high-potential handicapped pupils. These positive qualities include:

- intense desire to succeed;
- persistence in reaching goals;
- flexible strategies in coping with problems;
- awareness and use of personal strengths in school;
- analytical and creative abilities.

Whitmore and Maker (1985) suggest that many high-achieving handicapped adults were the beneficiaries of a supportive home influence, particularly as provided by their parents. Whitmore and Maker suggest that effective, nurturing parents of the gifted handicapped:

- have high expectations;
- do not emphasize handicaps;
- nurture a sense of independence;
- allow exploration of the environment;
- recognize successes;
- devote much energy to their children's upbringing.

Gifted handicapped children's persistence in pursuing their goals may be revealed in several ways. These youngsters may spend very long hours on academic or other intellectual tasks (D. Brown, 1983). When they are older, they may approach administrators of schools and other institutions in order to seek admittance to these agencies (Whitmore & Maker, 1985). Some

older gifted handicapped persons may industriously seek changes in their institutions' policies toward the handicapped, while maintaining a positive attitude toward these agencies (Robertson, 1985).

Successful high-potential handicapped students do not just log extended hours in their pursuit of academic goals, however. Some of them also spend time devising flexible strategies for reaching these goals. The production of flexible strategies may involve several kinds of behaviors:

- inventing numerous ways to reach a single objective (Robertson, 1985)
- devising creative problem-solving solutions that overcome personal limitations (Whitmore & Maker, 1985);
- coping with frustration through good humor (Udall, 1985) or participating in the creative arts (Elrod & Ryckman, 1984; Rack, 1981; Robertson, 1985).

The gifted handicapped are highly cognizant of their own flexible coping strategies (Wingenbach, 1985). In fact, a "meta-awareness" of many of their learning strengths--and a willingness to use these capabilities--often characterizes bright disabled persons (Whitmore & Maker, 1985). These are the strengths of which these individuals seem especially aware:

- a drive toward independence (Robertson, 1985; Whitmore & Maker, 1985);
- a willingness to focus on limited areas of interest (Robertson, 1985);
- good memory and ample motivation on high-interest topics (Udall, 1985; Whitmore & Maker, 1985).

Positive Characteristics Appearing as Negative Traits

The laudable qualities of high-potential handicapped children may not always seem praiseworthy to adult observers. There are two ways in which positive traits may appear as negative. First, gifted handicapped children's strengths may be used in the service of negative goals. These students may use their perceptiveness, for example, to identify and openly deride those school policies which strike them as inconsistent (Rosner & Seymour, 1983).

Second, positive qualities also may interact with negative characteristics to bring results that are especially painful to high-potential handicapped pupils. The perfectionism of these students, for instance, when paired with depressed academic performance, may lead to particular frustration (Whitmore & Maker, 1985). Similarly, these students' strong drive for achievement, when combined with handicaps that stand in their way, may result in their using an inordinate amount of time for academic tasks rather than for interpersonal relationships (Robertson, 1985).

It is possible to explain graphically how gifted handicapped children's strengths can interact with these youngsters' problems to produce distinctive implications for feelings and behavior. These implications are described in Table 2.

TABLE 2 *CHARATERISTICS OF GIFTED HANDICAPPED STUDENTS AND POTENTIAL IMPLICATIONS*

Gifted Characteristic	*Handicapped Characteristic*	*Implications*
Areas of strength	*Disabilities*	*Uneven performance*
Desire for challenge	*Desire for independence*	*Motivation*
Perfectionism	*Areas of low achievement*	*Frustration*
Heightened self-perception	*Supersensitivity*	*Fragile self-concept*
High aspirations	*Low expectations*	*Inner conflict*
Heightened intellectual and physical energy	*Limited outlets*	*Pent-up energy*
Few intellectual peers	*Few handicapped peers*	*Social difficulties*
High career ambitions	*Limited access*	*Feelings of exclusion*
Determination	*Disability*	*Creative problem solving*

IDENTIFICATION OF GIFTED HANDICAPPED STUDENTS

If one is familiar with the characteristics of gifted handicapped students, one is more likely to identify these pupils correctly and direct them toward appropriate educational programming. This section, like the monograph as a whole, concentrates on the gifted-education identification process. Gifted identification is emphasized rather than special education identification because it is the superior abilities of gifted handicapped pupils which go unnoticed more often their handicaps. Furthermore, special education identification procedures, while far from perfect (Ysseldyke, Algozzine, Richey, & Graden, 1982; Ysseldyke, Algozzine, Shinn, & McGue, 1982), have been federally mandated since 1975 by Public Law 94-142 and are familiar to many educators.

The term "identification" will be employed here as it is used in its broadest sense in the Virginia Plan for the Gifted. In that document, several steps culminate in the final identification of a pupil as one who should be placed in gifted programming. These steps include:

1. referral,
2. assessment, and
3. selection and placement.

This section discusses current difficulties in the identification of high-potential handicapped youth at each of these stages, as well as potential solutions at each stage.

Identification Problems

During the identification process, several sets of difficulties deter educators from determining handicapped students to be gifted. These problems include:

- lack of referrals resulting from stereotypical expectations for gifted students;
- assessment difficulties including deceptively low test scores;
- selection and placement problems.

Lack of Referral

Educators may have trouble in seeing the day-to-day strengths of some handicapped pupils. Eisenberg and Epstein (cited in Davis & Rimm, 1985) surveyed teachers of 60,000 handicapped students in New York City and failed to get back even one referral for their gifted-and-talented program for the handicapped. In selecting pupils for such a program, Eisenberg and Epstein suggested that educators often picked conforming children rather than those highly energetic youngsters who were more likely to be gifted (Davis & Rimm, 1985). Eisenberg and Epstein indicated that bright disabled children frequently are disruptive rather than conformist. Learning

disabled students, in particular, face significant obstacles to referral, since their disabilities tend to mask their giftedness.

Difficulties with Assessment

When teachers do refer gifted handicapped children, psychologists face problems in conducting appropriate student evaluations. Psychologists often receive inaccurate or incomplete prior assessments of these youngsters. In addition, they may be given the difficult chore of evaluating whether sensory-impaired handicapped children's tested intellectual deficits (such as those shown by visually-impaired youngsters) are long-term deficits, or instead are developmental delays that can be overcome if these children are gifted (Maker, 1977).

Gifted children typically are most expected to excel in the area of tested intelligence. This is unfortunate, because many types of gifted children may be underreferred on the basis of IQ scores (Harrington, 1982). Reliance on IQ scores does a particular disservice to high-potential handicapped pupils: these students' handicaps cause them to receive depressed scores on some subtests, fall below traditional total-test cut-off points for giftedness, and appear in the final analysis as something less than bright (S. Brown, 1984; Maker, 1977; Rawson, 1968).

When group measures of intelligence are used, gifted-identification problems are particularly acute for the handicapped. Bright handicapped youngsters may have especially pronounced problems on group IQ tests (Whitmore, Maker, & Knott, 1985), partly because of the reading difficulties and the distraction-filled settings associated with such measures.

Selection and Placement Problems

From the Terman era onward, many educators have felt that gifted children could do well at almost all activities in school (Fox, Brody, & Tobin, 1983). Thus, it is not really surprising that many school districts today require a long list of achievements for pupils to be chosen for, and thereafter placed in gifted programming. Gifted-program candidates often need to excel on IQ measures, standardized achievement tests, grades, **and** classroom-teacher recommendations (Whitmore & Maker, 1985). Unfortunately, most gifted handicapped children will not do well across the board in these areas (Whitmore & Maker). Students who are already in a program for the handicapped may not be considered for gifted program placement, if a choice of service must be made. Even when it is possible for both services to be provided, handicapped pupils must frequently display strengths beyond those of other candidates to obtain gifted placement.

Learning disabled (LD) students who have not been formally identified for special education services may show areas of strength not significant enough for gifted program placement, particularly if test scores are the sole measure of assessment. Additionally, LD students may receive test scores and grades not low enough to arouse educators' concern for special education identification (Harris & Avery, 1978). Senf (1983) indicates that the bright LD child, in the absence of sufficiently low ratings on these types of measures, must exhibit significant problems in activity levels and social relationships if they are even to receive a school psychologist's evaluation.

Potential Solutions to Identification Problems

A three-stage effort might be undertaken to overcome the aforementioned identification difficulties, and in the process increase the number of high-potential handicapped students who are referred, assessed, and selected for gifted programs. Educators can:

1) stimulate all children with a variety of experiences, in the hopes of bringing high-potential or currently-superior performance to referrers' attention (an idea adapted from the work of Karnes, Shwedel, & Lewis, 1983);
2) assess children with a variety of measures which will draw out their strengths (Virginia Plan for the Gifted, 1984);
3) select students for gifted programming based upon a broadened view of what constitutes a "bright" student (Maker, 1977).

Referral

Karnes, Shwedel, and Lewis (1983) indicate how an initial, "stimulation" phase of gifted identification might serve to encourage additional referrals. Specifically, these researchers describe the stimulation phase of their long-conducted RAPYHT (Retrieval and Acceleration of Promising Young Handicapped and Talented) program for identifying and teaching high-potential handicapped youngsters. While this project has focused on preschool children, its philosophy applies to students of all ages.

Karnes and her colleagues (1983) explain that, in RAPYHT, many of the youngsters in an overall educational program for the preschool handicapped are provided with stimulating experiences related to the six areas of giftedness covered by current or former federal definitions--intelligence, academic aptitude, creativity, visual and performing arts, leadership, and psychomotor skills. During this early identification phase (described at length in Karnes, 1979), a prolonged period of educational observation is often necessary, in part because some children may need time to exhibit skilled performance in areas to which they have not been exposed previously. Extended observation also may be needed by handicapped youngsters of all ages who recently have acquired special learning devices (such as the hearing and visually impaired): these children often need time

to begin using such devices optimally (Davis & Rimm, 1985). As teachers learn to stimulate and observe the students' areas of strength, referrals come more rapidly.

Assessment

Once handicapped pupils have had many experiences in which they can demonstrate their strengths and interests, a number of measures can help to determine whether these students are gifted:

- teacher observation;
- formal measurement;
- information from parents, peers and students themselves.

Combinations of these measures may be helpful in assessing giftedness among the handicapped. Indeed, Virginia's May 1986 Regulations Governing the Educational Program for Gifted Students mandates the use of multiple criteria in the assessment of gifted pupils. Even when a multiple-criteria assessment does not result in handicapped children's selection as gifted, this evaluation can provide valuable information for regular-education and special--education program planning (Birch, 1984).

Teacher Observation

Let us first describe educator observation, since it follows hand-in-hand with the stimulation activities discussed earlier in conjunction with the nomination phase. As educators provide students with experiences and observe these youngsters, it is important for teachers to know what behaviors and learning products indicate giftedness, and how to best look for such actions and outcomes (Whitmore & Maker, 1985). Educators may be assisted in this regard by in service training (Kranz, 1981) and a checklist of characteristics of high-potential handicapped pupils (Udall & Maker, 1983; Whitmore, 1980). A brief list of such characteristics, drawn from the previous discussion of the characteristics and identification of the gifted handicapped, is included in Table 3.

TABLE 3 ***CHECKLIST OF CHARACTERISTICS FOR OBSERVING THE POTENTIAL OF HANDICAPPED STUDENTS***

_____ *High level of energy*

_____ *Great perseverance in areas of strength*

_____ *Intense drive to achieve in areas of strength*

_____ *Good memory in areas of strength*

_____ *Perceptiveness*

_____ *Analytical abilities*

_____ *Creativity*

_____ *Good sense of humor*

_____ *Frustration from unmet goals*

_____ *Unusual, effective compensations for weaknesses*

_____ *Desire for independence*

_____ *Uneven performance*

Formal Measurement

Formal data collection can be a helpful supplement to teacher observation. Helpful instruments can tap at least three areas:

1) intellectual ability as a whole;
2) certain aspects of intelligence, such as creativity;
3) factors sometimes associated with intelligence, such as motivation and leadership.

With regard to **general intelligence**, individually-administered measures of ability like the Stanford-Binet or WISC-R can be helpful in assessing the gifted handicapped (Whitmore & Maker, 1985). While observers suggest the value of reporting an overall score on these tests (Kaufman & Harrison, 1986), they frequently also support the reporting of specific student strengths and weaknesses on these measures, and the interpretation of test outcomes in light of the nature of the particular instrument and child (Kaufman & Harrison, 1986; Whitmore & Maker, 1985). The WISC-R is preferred over the Stanford-Binet by observers like Fox and Brody (1983), specifically because the former test offers indications about particular abilities associated with that measure's Verbal and Performance sections and its various subtests.

Unfortunately, standardized intelligence tests sometimes draw on bright handicapped students' weaknesses as much as their strengths. Thus, alternative administrative methods or completely different tests may be recommended for measuring the intelligence of some of these children. While such methods and tests actually may measure only selected aspects of intelligence, they still may be helpful in finding the extent of gifted handicapped children's intellectual *strengths*.

The professional literature has discussed tests of intellectually-related abilities that may be particularly suitable for three groups of the gifted handicapped--the hearing impaired, learning disabled, and visually handicapped. The hearing impaired may be administered just the Performance section of the WISC-R (Whitmore & Maker, 1985). They also may be administered the Ravens Progressive Matrices or the Leiter International Preference Scale (complete with its pantomimed instructions and visual materials) (Whitmore & Maker, 1985).

The gifted learning-disabled may be given the entire WISC-R, with their results analyzed for a discrepancy between that test's Verbal and Performance sections. There may be a large disparity between bright LD pupils' two section scores, with one score being in the gifted range and the other not. Schiff, Kaufman, and Kaufman (1981), in comparing the WISC-R Verbal-Performance differences in gifted LD and normal pupils, found a gap of 18.6 points for gifted LD youngsters, compared to 9.7 points for normal

children. (Schiff notes that the disparity found in bright LD students was usually in favor of the Verbal section.) In addition, gifted LD pupils also may be distinguished from other students by scoring lower than these other two groups on the Token Test for Children, a receptive language measure (Chermak & Burgerud, 1983).

The visually impaired might benefit from taking the Blind Learning Aptitude Test (Newland, 1976). This measure infers pupils' levels of intelligence by how well they use their haptic abilities.

A wide variety of gifted handicapped children might benefit from a second kind of formal intellectual measurement: a **creativity** assessment. The importance of such an evaluation is suggested by the accomplishments of many individuals who had only somewhat above-average IQs and achievement-test scores, but who eventually made tremendous social contributions through their creative skills (Renzulli, Reis, & Smith, 1981). Rawson (1968) and Maker (1977) suggest that numerous high-potential handicapped students will have IQs in the above-average range, but will be very creative.

A creativity assessment can be conducted with tests, checklists, and/or biographical inventories. Helpful tools which may be used in this assessment include the Torrance Tests of Creative Thinking (1966), Torrance's checklists of "non-test indicators" of creative ability (1981),

Rimm's inventories GIFT (1980a, 1980b) and PRIDE (1983a, 1983b), and Davis and Rimm's inventories GIFFI I and II (Davis & Rimm, 1980, 1982; Rimm, 1984). "Non-test indicators" are difficult-to-quantify creative actions often related to task effort and enjoyment; inventories are information-gathering tools that catalog children's interests, preferences, and hobbies.

A third type of formal measurement is similar to creativity assessment. This measurement relies on scales upon which the evaluator rates specific characteristics on a weighted basis. Several types of scales are commonly used in the identification process for gifted placement. Like creativity assessment, this type of measurement deals with factors related to intelligence--specifically the factors of learning and motivational traits. Eisenberg and Epstein (in Davis and Rimm, 1985) found these characteristics from the Renzulli-Hartman "Learning" Scale (Renzulli, 1983) to be useful in finding the gifted handicapped:

- Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age).
- Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick."
- Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film, etc. than others.

Eisenberg and Epstein also discovered these traits from Renzulli's "Motivational" Scale to be useful:

- Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.)
- Prefers to work independently; requires little direction from teachers.

Recently, there have been tentative additional findings to suggest that gifted LD pupils score higher on Renzulli and Hartman's entire Motivational Scale than do either LD or gifted students (Savage, 1988).

Information from Parents, Peers, and Students

Formal instruments and teacher observations are not the only ways to assess the gifted handicapped. Information obtained from parents, peers and the gifted handicapped themselves often prove very accurate in assessing gifted behavior and products. In Eisenberg and Epstein's project (Davis & Rimm, 1985), 9 out of 10 handicapped children who referred themselves for gifted services were found to be right! It could well be that these pupils were able to gauge intuitively the degree of their strengths, and hone these strengths industriously despite their troubles in other areas.

Peers can be helpful in providing information about high-potential handicapped children that teachers sometimes do not know. Maker, Morris, and James (1981) suggest items that classmates can use during the referral process, including items asking for the names of children with the "wildest" notions and largest number of good ideas. Classmates also might be able to name peers who frequently are asked for help, and those who are the first to suggest or explain something.

Parents can be accurate identifiers of their children's giftedness from age four onward (Ciha, Harris, C. Hoffman, & Potter, 1974; Hanson, 1984). Like peers, parents might be helpful in relaying to school personnel some important but hidden facts about gifted children (Davis & Rimm, 1985). Examples of such facts might include youngsters' well-developed interests in rocketry or foreign cultures.

Selection and Placement

Gifted handicapped children may be admitted to gifted programs in one of several ways:

- if their educational profiles of potential and achievement are high compared to similarly handicapped peers (Maker, 1977);
- if their profiles are comparable to those of typical non-handicapped candidates (the traditional approach to selection);

- if their achievements in areas impacted by their disabilities are lower that those of typical non-handicapped candidates but their achievements in their strong areas are at least as good as those of typical candidates.

Conclusions on Identification

Summarizing the literature on the identification of the gifted handicapped, it may be helpful to list some specific suggestions for finding these pupils. Those suggestions can be found in Table 4.

TABLE 4 ***PRACTICAL SUGGESTIONS FOR IDENTIFICATION OF GIFTED HANDICAPPED STUDENTS***

- *Acknowledge the potential for a student to be both gifted and handicapped.*
- *Offer continual opportunities for handicapped students to demonstrate their particular interests, talents, and abilities.*
- *Use a variety of assessment measures, both formal and informal.*
- *Review information gathered as part of the special-education identification process, from the perspective of the student's strength.*
- *Train teachers and other evaluators to observe and assess the strengths of handicapped students.*
- *Use appropriate formal testing instruments and appropriately modified test administration in dealing with each disability.*
- *Review a broad profile of data on each student.*
- *Include parents, peers, and students themselves in the referral process.*
- *Search for potential at least as much as achievement.*

PROGRAMMING FOR GIFTED HANDICAPPED STUDENTS

When gifted handicapped pupils are placed in exceptional-child programming, they most frequently are placed in programs for the handicapped and are excluded from programming for the gifted. Gifted learning-disabled students, in particular, may receive no formal services in gifted education or special education because their disability is not diagnosed (Senf, 1983). When gifted handicapped pupils do receive special education, it most often is designed for students who function normally to below normally, and it pays little attention to areas of strength. An exclusive focus on the problems area is typical.

Appropriate, wide-ranging programming for complex gifted handicapped students should be developed by considering recommendations on:

- general program guidelines;
- student academic growth;
- all other available school and community options.

The programming may occur in one or more instructional settings outlined in Table 5.

TABLE 5 *SETTINGS AVAILABLE FOR EDUCATING GIFTED HANDICAPPED STUDENTS**

1. *Gifted Education Settings (adopted from Clark, 1979)*

   Regular classroom with consultation
   Cluster grouping
   Resource assistance
   Honors/accelerated classes
   Full-time classroom
   Center school
   Regional program
   Residential School

2. *Special Education Settings for Handicapping Conditions (adopted from Hallahan and Kauffman, 1986)*

   Regular classroom with consultation
   Resource assistance
   Hospital
   Full-time classroom
   Center school
   Regional program
   Residential school
   Homebound

3. *General Education Settings*

* Appropriate education for a gifted handicapped student will be a blend of services provided within these settings and matched to the student's strenghts and areas of need.

General Principles

Because high-potential handicapped children are diverse in their personalities, as well as in their types and degrees of giftedness and disabilities (Jacobson, 1984), it is not surprising that programming for them can vary as much as for "regular" gifted students (Davis & Rimm, 1985). There are, however, several overall guidelines to direct actions which are undertaken on these children's behalf. These principles concern the responsibilities of school personnel for dealing with these children, as well as the role that these youngsters might play in their own education, and the manner in which administrators treat these students.

Responsibilities of School Personnel

Because of the complexity and sometimes inconsistent performance of the gifted handicapped child, a team effort truly is required to identify this student (Whitmore & Maker, 1985). Once identified, there should be a thorough team meeting, one in which all staff members with a knowledge of the child consider educational options reflecting both the youngster's disabilities and strengths (Baldwin & Gargiulo, 1983). Special educators, gifted program educators, and regular education staff members must assume responsibility for various components of the total education program for the gifted handicapped child (Whitmore & Maker, 1985).

Involvement of the Gifted Handicapped in their Education

As high-potential handicapped children interact with school personnel throughout the course of their scholastic program, they require several specific kinds of assistance. First, they need information about, and advice on how to handle, their dual exceptionalities (Whitmore, Maker, & Knott, 1985). Second, they need to be challenged to use these personal strengths in activities that promote their giftedness (Hofmann, 1983). Handicapped students can display extreme persistence and motivation in activities related to their areas of giftedness. Third, the gifted handicapped should have any adaptive equipment that they need, in order to display their strengths and mitigate their weaknesses.

Actions of Administrators

In implementing general principles for gifted programming, there are a number of guidelines which seem particularly applicable to principals and central administrators. These guidelines are presented in Table 6.

TABLE 6 ***PRACTICAL IMPLICATIONS FOR ADMINISTRATION IN EDUCATING GIFTED HANDICAPPED STUDENTS***

- *Formally acknowledge the potential for both special-education and gifted diagnoses for a child.*
- *Assure availability of services for both handicapping conditions and giftedness.*
- *Find ways to strengthen a team approach to educating the gifted handicapped.*
- *Consider a variety of ways to meet the needs of gifted handicapped students in a variety of settings.*
- *Facilitate identification procedures that assure the consideration of handicapped students for gifted programs.*
- *Maintain a data base on gifted handicapped students who are served.*
- *Facilitate the development of instructional models for gifted handicapped students.*

Academic Programming

In addition to general programming principles, there are specific guidelines applicable to the academic setting which may prove helpful to the gifted handicapped. There are four types of scholastic instruction which may be suitable for high-potential handicapped pupils:

1) gifted programming in areas of strength
2) developmental instruction in subjects of normal growth
3) remedial teaching in areas of disability
4) adaptive instruction in areas of disability

Because most readers of this report are familiar with developmental (or "regular") programming, this section will focus on gifted, remedial, and adaptive instruction.

Differentiated Programming for Giftedness

High-potential handicapped children need to experience the raised expectations associated with gifted education. These youngsters also require a program be guided by specific organizational principles.

High Expectations

The raised expectations of school personnel and peers can spur the gifted handicapped toward higher achievement (Whitmore & Maker, 1985). Teachers, in particular, can facilitate giftedness by creating an environment of favorable anticipation (Whitmore & Maker, 1985).

Currently, however, high-potential handicapped children may not sense high expectations on the part of educators. In the classroom, these youngsters may experience just the lower levels of learning that are transmitted through the usual textbook-lecture-test format. In the special-education resource room, they may receive a great deal of drill and practice on skills on which they have previously failed, an educational regimen that may be necessary but that is far from inspirational. Sadly, some gifted

handicapped youth who have received instruction in just the regular and special-education resource classrooms have been found "limping along," manifesting little or no evidence of giftedness (Meisgeier, Meisgeier, & Werblo, 1978, p. 328).

Specific Organizational Principles.

Increased expectations for high-potential handicapped pupils need to be supplemented by concrete guidelines on how to structure gifted instruction for them. Well-organized instruction can occur in a variety of settings, both inside and outside the classroom.

In the classroom, the regular curriculum can be compacted (Renzulli & Smith, 1979), so that gifted handicapped children will have time to take part in enrichment programming. Once these youngsters begin receiving gifted instruction, they must participate in experiences which have been well-planned by their teachers so that instruction continues to be challenging and coordinated.

Educators must emphasize abstract, higher-level thinking skills such as critical and creative thinking, with high-potential handicapped youngsters. However, teachers should remember that the gifted handicapped may not learn these skills automatically (Daniels, 1983). Indeed, all gifted students require instruction in these skills: conceptualization, generalization,

classification, analysis, synthesis, creative problem-solving, and evaluation must be taught specifically. Whitmore and Maker (1985) support Taba's (1971) concept-development strategy and Parnes' (1966, 1975) creative problem-solving approaches as organized methods which may be helpful to the gifted handicapped.

Once higher-level intellectual skills have been learned, it is important to give gifted handicapped students a chance to employ these skills on their own. Not only can these pupils' increasing independence in learning be an important trend in their academic development, it also can be a part of a movement toward self-reliance in all segments of their lives.

Outside of the classroom, various opportunities exist for developing the strengths of the gifted handicapped. Available options include mentorships with handicapped adults who are skilled in the same areas as the youngsters (Gallagher, 1983), and memberships in groups of bright handicapped pupils. Gartner (1985) notes that there is a national organization devoted specifically to the needs of handicapped college students, the Association on Handicapped Student Service Programs in Post-Secondary Education (AHSSPPE).

Remedial Instruction

It is important to address not only the strengths but the weaknesses of the gifted handicapped. Although not all handicapped students will have academic deficits, some, including learning disabled youngsters, will have areas of academic need. Other handicapped students may have developmental delays or specific difficulties related to the nature of the handicapping condition. Gifted handicapped persons who continue to show basic-skills deficits may face obstacles both in college (Minner & Prater, 1984) and in the job world (Gottfredson, Finucci, & Childs, 1984). Educators can address these individuals' basic-skills weaknesses in two major ways--by remediating these problems or by teaching students to adapt to them.

Remediation is the procedure often suggested for elementary-age children (Block, 1980; Fox, Tobin, & Schiffman, 1983). This approach frequently is chosen because it mitigates directly these youngsters' sometimes still "confined" academic difficulties. Teachers engaged in remediation should be cognizant of:

- general recommendations for conducting this approach;
- specific, helpful techniques for remediating academic-skills deficits;
- ways to improve pupil attention and attitude during remediation;
- cognitive strategies which remedial students can be taught to implement on their own.

General Recommendations for Remediation

There are four overall suggestions for teachers engaged in remediation of the gifted handicapped (derived from Daniels, 1983):

1) Deal constructively with problematic student conduct, instead of taking it personally.
2) Implement appropriate counseling techniques.
3) Involve children actively in decisions about their education.
4) Recognize and accommodate the various learning styles of the students.

Specific Remedial Techniques

Whether the gifted handicapped receive remediation in a group or as individuals, they might benefit from some amount of direct instruction to lift their basic academic skills in reading and mathematics (Lloyd, Epstein, & Cullinan, 1981). While the availability of this technique does not come with an ironclad guarantee of students' basic-skills success, it does seem to offer some hope (Gersten, Carnine, & Woodward, 1987). In addition to basic-skills instruction, an emphasis on time-management and organizational skills may be needed by some of the gifted handicapped (Udall, 1985).

Approaches for Improving Attention and Attitude

Educators might improve children's attentional behavior and attitude--and thereby increase the impact of helpful remedial techniques--by teaching self-monitoring and relaxation to these youngsters. Self-monitoring (Hallahan, Lloyd, Kosiewicz, Kauffman, & Graves, 1979) allows students to gradually lengthen their attention spans. Relaxation techniques (Udall, 1985) enable pupils to deal with the stress that builds up during difficult instruction.

Constructive Mental Outlooks

Gifted handicapped students can do more than utilize the aforementioned teacher-initiated remedial techniques for improving academic skills, attention, and attitude. They can bolster their own performance by using techniques for dealing with an academic weakness, approaches suggested by Whitmore and Maker (1985):

- building a positive mind-set toward a difficult task;
- asking for help to understand something;
- putting in extra effort on a task.

With regard to the final recommendation, Dale Brown (1983), a high-achieving LD student, indicates that as she grew older, she volunteered to give up many social outings in order to excel.

Adaptive Instruction

Some children may never learn a basic skill satisfactorily, even with remediation (Richards, 1981). By late elementary school or junior high, they need adaptive instruction so that they can acquire information without interference from their handicaps. Teachers and pupils can play an important role in this kind of programming, both as separate groups and together.

Students can assist in their own instruction by using their handicapped senses to the fullest. Visually-impaired children, for example, can use their residual vision effectively, once they are taught the appropriate adaptive procedures (Barraga, 1964). These pupils also can put maximum effort into learning how to utilize new equipment that promises them long-term benefits, equipment like the Optacon and Kurzweil Reader (Whitmore & Maker, 1985).

Another area to be considered is self-instructional strategies. These strategies are indirect, cognitive approaches to acquiring observable behaviors and sets of information. These strategies often provide students a step-by-step structure that they can use on their own to solve categories of academic and social problems.

Although self-instruction strategies have been validated primarily with "regular" (i.e., not necessarily gifted) groups of handicapped pupils (Deshler, Warner, Schumaker, & Alley, 1983), these strategies may hold particular promise with the gifted handicapped. This promise is related to learning strategies' emphasis on pupils' higher-level intellectual functioning. In addition, because self-instructional strategies serve as scholastic "shortcuts," they may provide the gifted handicapped with the motivation necessary to learn. Indeed, high-potential handicapped students may very much want to move beyond the necessary basics to more interesting material.

There are several examples of validated self-instructional strategies for problem learners. Torgeson and Kail (1980) found that LD students' recall of listed information could be as proficient as normal pupils' memory, when LD children used clustering and verbal rehearsal. B.Y.L. Wong (1986) discovered that a seven-step self-questioning strategy helped deficient sixth-grade spellers improve their spelling accuracy on words with suffixes from 27% to 78% in a single week. And Fortner (1986) explained how 49 self-contained LD pupils improved significantly in their ability to generalize their recently-learned creativity strategies from instructional conditions to spontaneous situations.

With regard to the gifted learning disabled, this group might compensate for some of its learning difficulties by mastering and employing the not-yet-validated strategies advocated by Udall (1985) and Maker, Redden,

Tonelson, and Howell (1978). Udall recommends that gifted LD children, in particular:

- use memory strategies;
- analyze their own learning styles;
- develop personally useful study habits.

Maker and her colleagues (1978) suggest that the high-potential handicapped:

- read extensively on assigned topics;
- grasp the author's style when reading;
- tie abstract to concrete notions;
- take classes with friends who might help them;
- ask questions to clarify concepts discussed in class;
- ask the best note-taker in class for copies of his or her notes;
- take independent-study courses.

Conclusions on Academic Programming

The literature on gifted, remedial, and adaptive instruction for the gifted handicapped can be reviewed through a set of recommendations to educators as outlined in Table 7.

TABLE 7 ***PRACTICAL IMPLICATIONS FOR ACADEMIC INSTRUCTION OF GIFTED HANDICAPPED STUDENTS***

- *Work as a team of professionals in gifted and special education to create an instructional plan for a child.*
- *Involve the child in the instructional planning and assessment.*
- *Develop a program that accommodates both giftedness and handicapping conditions.*
- *Assure instruction that is consistently challenging and specific in its differentiation.*
- *Maintain high expectations for the child.*
- *Present activities that foster critical and creative thinking, as well as problem-solving.*
- *Plan activities that foster growth toward independence.*
- *Address any instructional deficits directly with the child and work together to use the most effective methods to provide remediation, assistance, or adaptation.*
- *Provide several ways for the student to present a product or demonstrate proficiency.*
- *Strengthen the child's communication skills.*

Programming to Enhance Self-Concept

Building a healthy self-concept in gifted handicapped children is a complex, multi-faceted matter. In helping students, teachers must be knowledgeable in at least four areas:

1) basic information about the importance of the self-concept
2) general recommendations for improving the self-esteem of bright handicapped pupils
3) specific guidelines for lifting these students' self-worth in the realm of social interaction
4) administrative arrangements which may be helpful in bolstering these pupils' sense of self-worth.

Importance of the Self-Concept

First and foremost, teachers must become aware that self-esteem is an extremely powerful determinant of human behavior (Felker, 1974; LaBenne & Green, 1969; Purkey, 1970), and that it plays an especially important role in many people's level of achievement (Charles, 1976; Shaw & Alves, 1963). Self-concept has been hypothesized specifically as an integral part of gifted children's success (Feldhusen & Hoover, 1986).

Unfortunately, gifted pupils with substantial difficulties--like many students who are "just" gifted or "simply" handicapped--often may exhibit relatively low self-concepts (Chapman & Boersma, 1979; Clark, 1979; Walsh, 1956).

Bright handicapped pupils seem to struggle with low self-esteem for years, and sometimes even acknowledge their own "inferior" status, despite their high abilities (Maker, 1977). Many members of this handicapped group may display low self-esteem in school and at home (Thomson & Hartly, 1980).

Self-concepts may vary widely among the gifted handicapped, depending on a variety of factors. Regarding self-concepts assessed just in an academic context, for example, variations may occur depending on students' socioeconomic status, their performance in word knowledge and mathematics, and the presence or absence of an exceptional-child label (Johnson & Johnson, 1984; M.D. Smith, 1979).

As a broad generality, however, it does appear that handicapped children's sense of self-worth can grow with the appropriate teacher, intellectual peers, and instructional modifications (Whitmore & Maker, 1985). Thus, self-concept improvement is a viable, as well as an important, goal for gifted handicapped programming.

General Recommendations on Self-Concept

In approaching the objective of lifting the overall self-esteem of high-potential handicapped students, two suggestions might be made. First, an initial evaluation of a child's self-esteem might be conducted. This assessment might attempt to identify both points of pride and areas of self-

perceived weakness. Pupil self-evaluation forms, such as Barksdale's (1972) form for older students, are available for this purpose.

Second, for dealing with a gifted handicapped youngster's self-perceived strengths and weaknesses, experts have offered advice that is applicable to adult caretakers generally and teachers particularly. Whitmore and Maker (1985) suggest that educators and parents alike:

- keep perceptions of an individual's limitations open-ended;
- convey realistic expectations, but within this objective framework, help the child to obtain a positive view of the future;
- advocate for appropriate educational opportunities for the youngster;
- encourage independence;
- guide the development of self-understanding and constructive coping;
- provide daily opportunities to build on strengths and enjoy success;
- arrange positive social experiences for the child.

A variety of experts have offered suggestions specifically to teachers regarding overall pupil self-concept. Daniels (1983) suggests that teachers need to discover a student's strengths and weaknesses in particular scholastic skills, and assess the quality of his or her daily performance in these skill areas according to the extent of these capabilities and limitations. Further, Davis and Rimm (1985) indicate that the handicapped pupil's particularly outstanding achievements should be lauded not only because they exceed the general student norm, but especially because they involved the overcoming of personal or other barriers.

Once gifted handicapped pupils' academic strengths are found, teachers must take special care to allocate time for these children to work on those strengths. Educators also must take time to recognize excellent performance by the gifted handicapped in their strong areas.

In addition, however, educators must attend to two self-concept-related factors while programming for the academic strengths of the gifted handicapped. First, teachers must allow for the independence and the intrinsic motivation that drives the gifted handicapped child (Cohen, 1986). And second, educators must be careful not to use unique creative strengths (which may be points of special student pride) to remediate discouraging weaknesses (Baum & Kirschenbaum, 1984; Klein, 1980).

Suggestions Regarding the Social Self-Concept

If high-potential handicapped individuals are to increase significantly their general sense of self-esteem, they need to interact successfully with others. To interact successfully, they must have both "inner" and "outer" social competencies: these competencies include interpersonal ("inner") awareness and observable ("outer") social skills.

Interpersonal awareness includes several competencies that the gifted handicapped must acquire:

- metacognitive skills for accurately perceiving the social environment (Clary, 1984);
- coping skills for dealing in a healthy fashion with interpersonal difficulties (Bazakas, 1978);
- a locus of control that tolerates failure when failure is due to poor luck (Weiner & Sierad, 1974).

Observable social behaviors which the gifted handicapped may need to learn include:

- appropriate participation and cooperation in groups;
- constructive reactions to stressful school experiences.

Teachers and counselors of the gifted handicapped can play a major role in helping children to learn appropriate, observable social behaviors. For example, in teaching constructive reactions to stressful situations, educators can emphasize these stress-reduction techniques adapted from Silverman (1988):

- brainstorm alternatives for dealing with a difficult situation, making some of them silly;
- do relaxation exercises, listen to soft music, visualize peaceful scenes, read or play a quiet game or take a walk;
- talk about problems, or share feeling honestly, with teachers or parents.

As teachers address either the interpersonal awareness or the social conduct of the gifted handicapped, these educators must be sensitive to the fact that they are addressing different sex, age, and disability subpopulations. With regard to sex differences, Leroux (1988) has pointed out that the self-concepts of gifted adolescent boys and girls hinge on different factors. Concerning age groups, the writings of Coleman (1983) suggests that handicapped adolescents may need particular help in dealing with certain disheartening, age-specific, outside-of-school experiences such as those involved in job hunting. And in alluding to particular handicapped groups, Whitmore and Maker (1985) suggest that teachers must differentiate their instruction from one of these groups to the next.

Effects of Administrative Arrangements on Self-Concept

The social and general self-esteem of the gifted handicapped does seem to be affected by the setting of their education. Generally speaking, it seems that self-worth is deflated by a good deal of segregation from normal and gifted peers (Whitmore & Maker, 1985).

Some time with handicapped peers may be helpful to a high-potential handicapped individual, however, the appropriate amount of contact depends on the nature and severity of that individual's handicap. There are a variety of opportunities for healthy interaction among handicapped children, including big-brother and big-sister mentorships (Whitmore &

Maker, 1985). And gifted handicapped youngsters who need instruction in the special-education resource room may become leaders there (Eisenberg & Epstein, 1981, cited in Davis & Rimm, 1985).

Time spent with just gifted handicapped peers also might lift these children's self-esteem. This appears particularly true when the gifted handicapped's self-concept in the special-education resource room is compared to these students' self-concept in a gifted-handicapped setting (Baum, 1988). Further, a substantial amount of segregated time might be particularly helpful to high-potential children with pronounced difficulties, such as the severely hearing impaired (Coleman, 1983).

While there can be benefits to mainstreaming, it is not a cure-all for the gifted handicapped. Mainstreaming often may be associated with insensitivity from regular classroom pupils. Some regular pupils, for example, may construct a rejecting mind-set to the handicapped before the handicapped ever arrive in the mainstream setting (Semmel & Cheyney, 1979). In addition, if the programming in the regular classroom cannot be differentiated to accommodate the gifted handicapped students, little progress will be made in meeting the unique needs of the learner.

In reviewing the administrative arrangements most helpful to gifted handicapped, educators should consider specific ways to address the social and emotional needs of the students. Areas to be addressed are included in Table 8.

TABLE 8 *ADDRESSING THE SOCIAL AND EMOTIONAL NEEDS OF THE GIFTED HANDICAPPED STUDENT*

- *Encourage self-analysis, self-accepance, and self-assistance.*
- *Provide opportunities to explore interests and work on strengths.*
- *Offer opportunities to make choices and work independently.*
- *Teach stress-reduction techniques.*
- *Include the child in various peer groups, including those with intellectually-gifted and handicapped peers.*
- *Provide cooperative learning activities.*
- *Provide mentorships and models.*
- *Encourage the child's sense of humor.*

STAFF DEVELOPMENT AND COMMUNITY INVOLVEMENT

By themselves, the preceding suggestions on bolstering the gifted handicapped's academic performance and self-concept may not greatly improve these children's status. Gifted-education, special-education, and regular-classroom teachers must be trained specifically in the attitudes and instructional behaviors needed to carry out these suggestions. In addition, there must be appropriate involvement from counselors on the school staff, and from peers, parents, and the whole community, in order for gifted handicapped children to grow substantially.

Teacher Training

The present need for teacher training is particularly clear. Educators currently have many problems in meeting the academic and self-concept programming needs of high-potential handicapped pupils. It is helpful to describe these teacher-training problems before offering recommendations to allay these difficulties.

Current Problems

Maker and her colleagues (1978) describe salient difficulties which may be caused by educators of the gifted handicapped. Maker suggest that some teachers:

- have inappropriate expectations for their students;
- convey these inappropriate expectations through specific, negative behaviors.

Educators frequently have inappropriate expectations for handicapped pupils. Too often, teachers see these children primarily in terms of their problems. Handicapped students frequently may feel like responding to this treatment by proclaiming, "I am not a wheelchair!" (Winter & DeSimone, 1983, p. 27). Teachers who focus too much attention on handicaps may expect these youngsters either to be failures or over achievers (Winter and DeSimone (1983, p.27).

In developing erroneous expectations, teachers may be influenced strongly by labels (Johnson & Johnson, 1984). With reference to the learning disabled, for example, Reid (1984) indicates that in four of seven studies, when children were labeled "LD" for experimental purposes, these children received lower educator expectations than when they were labeled "normal."

In reacting to such labels, teachers may forget several important factors:

- the innate worth of all handicapped groups;
- the great variation among the individual members of these groups;
- the need to assess these individual members on a day-to-day basis.

Adults convey decreased expectations to the handicapped through several identifiable behaviors--pitying, ignoring, and avoidance (Jernigan, 1983). Adults also may offer double-edged praise, which lauds handicapped persons' achievements but also reminds them of their disabilities (Whitmore & Maker, 1985).

Potential Solutions

Researchers currently do not know the best ways of informing teachers of appropriate expectations, encouraging them to show helpful actions, and getting them to modify those actions when necessary. In the past, teacher-training efforts to solve these and similar problems related to handicapped students' treatment have provided educators with:

- information alone;
- information supplemented by experience;
- diagnostic and instructional skills.

Information Alone

Inservice presentations to teachers about handicapped children have produced mixed results. Informational presentations can improve teacher attitudes, (Winzer, 1984), depending on how well the presentation is made and the disability of the group involved. However, it is uncertain whether inservice information alone is sufficient to get teachers to show appropriate attitudes or behaviors on a long-term basis (Jamieson, 1984). The uncertainty over inservice instruction's effectiveness prevails even on matters as narrow as making appropriate student-placement decisions (Becker, 1980; Kauffman, 1977; Nielsen, 1979). Inservice training alone on broader matters, such as the successful implementation of mainstreaming, can be particularly unsuccessful at times in changing attitudes (Hendricks & Sloan, 1981).

Information Supplemented by Experience

While information alone admittedly is not a cure-all, teacher education that builds positive expectations toward the gifted handicapped should have some broad, initial knowledge component. On a general level, educators need to learn more about the significant role that positive attitudes from teachers, peers, and parents can play in the academic and social growth of pupils (Bradley & Newhouse, 1975; Gronlund, 1959). Educators also must understand the favorable influence that they can exercise on their

handicapped pupils for years to come, particularly if a close teacher-student bond develops (Coleman, 1983; Whitmore & Maker, 1985).

On a more specific level, educators must learn about the characteristics of high-potential handicapped children, particularly the complex traits displayed by hard-to-understand, bright disabled adolescents (Rosner & Seymour, 1983). Educators should know that the gifted handicapped need room to test their limits (Robertson, 1985) and that early and continuing educational treatment may well be needed by these students (Whitmore & Maker, 1985).

Presently, there is uncertainty about the best ways for educators to acquire and employ all this general and specific knowledge about the gifted handicapped. Videotape presentations can help improve teacher attitudes toward the handicapped, at least under some circumstances (Iverson & Davis, 1981). Experts sometimes recommend that theoretical information about handicapped pupils be supplemented by direct experience with these students (Haring, 1956; Jamieson, 1984). A pairing of information and experience can lift educators' feelings of classroom-teaching competence concerning these youngsters (Glass & Meckler, 1972). Unfortunately, as Jamieson (1984) notes, experience does not always result in more positive teacher attitudes toward handicapped pupils.

Instruction in Diagnostic and Teaching Skills

While information about handicapped students and experience with them may prove helpful to many teachers, these measures do not necessarily teach educators the day-to-day skills which they will need to help these pupils. Daniels (1983) indicates the need for such skills in teachers of the gifted handicapped. He suggests that educators develop diagnostic skills so that they can better assess the strengths and weaknesses of students' work products, and then teach in accordance with these strengths and weaknesses.

Lewis and Daniels (1983) describe a formal clinical program dedicated specifically to developing diagnostic and teaching skills in educators of the gifted learning-disabled. This program was conducted by Johns Hopkins University, and focused on bright, elementary-aged LD children. The project entailed student referral from various sources, a 5:1 student-teacher ratio, a theme-based curriculum, an interdisciplinary treatment approach, an emphasis on learners' strengths as well as weaknesses, and a diagnostic-prescriptive approach toward dealing with weaknesses.

Conclusions on Teacher Training

In considering the problems and potential solutions regarding teacher training for the gifted handicapped, it is possible to offer schools some specific recommendations on staff development exercises for its staff members. Some practical considerations are included in Table 9.

TABLE 9 ***PRACTICAL IMPLICATIONS FOR STAFF DEVELOPMENT IN EDUCATION OF GIFTED HANDICAPPED STUDENTS***

- *Provide training for regular classroom teachers and counselors, as well as for gifted-education and special-education personnel.*
- *Tailor experiences to the expertise of each staff group.*
- *Present basic understanding of the uniqueness of gifted handicapped students.*
- *Provide basic understanding of the range of possible characteristics of gifted handicapped students.*
- *Provide instruction in diagnostic skills.*
- *Present practical strategies for working with gifted handicapped students.*
- *Develop team approaches for identification and programming.*
- *Provide opportunities for ongoing staff development.*

The Role of the Counselor

Counselors can play a vital role facilitating progress among the gifted handicapped. Unfortunately, counselors, like teachers, presently have problems in providing appropriate services to the gifted handicapped. But counselors, like teachers, also can take steps to improve their efforts.

Current Problems

The imperfect counseling situation faced by today's gifted handicapped students needs to be put into perspective: there have been some counseling successes with these children. Rack (1981), for instance, describes the effectiveness of an adult therapist in promoting a positive change in the outlook and behavior of a gifted LD boy. And Whitmore and Maker (1985) present case studies of gifted persons with various handicaps, some of whom were given effective formal or informal advisement by school personnel.

Unfortunately, many other gifted handicapped children currently appear to receive unsatisfactory counseling. Gerken (1979) indicates how little emphasis historically has been placed on recognizing the strengths and encouraging productivity among gifted handicapped. In the past, the jobs taken by the gifted handicapped have been all too often of the less-challenging variety. And while things may appear better in some quarters today, there still may be trends toward a narrow view of the future of the gifted handicapped. Winter and DeSimone (1983), for example, indicate that some counselors may push a disproportionate number of the gifted handicapped toward social-service employment.

Potential Solutions

Experts suggest several steps that may improve educators' and particularly counselors' advisement of gifted handicapped students. First, educators need to become informed about the traditional strengths and needs which have been shown by the gifted handicapped generally (Walker, 1985) and by gifted handicapped subgroups specifically (Whitmore & Maker, 1985). Educators also need to actively seek out the strengths as well as the weaknesses of the individual gifted handicapped pupil (Gerken, 1979). And finally, they need to inform this student of his or her strengths and weaknesses. Pupils with multiple strengths must at some point narrow their career options (Robertson, 1985).

Counselors and other educators probably need be less cautious than they formerly were in recommending college to high-potential handicapped pupils (Vogel, 1982). Colleges increasingly have started programs for students with various handicaps (Gartner, 1985; Vogel). In addition, some gifted handicapped elementary students have done increasingly well in scholastic pursuits as they grow older (Whitmore & Maker, 1985). This has been noted particularly with regard to some of the gifted learning-disabled (Rawson, 1968; Whitmore, Maker, & Knott, 1985). While learning disabilities appear to stay with LD individuals as they grow toward adulthood (Cordoni, O'Donnell, Ramaniah, Kurtz, & Rosenshein, 1981; Short, Feagans, McKinney, & Appelbaum, 1984), brighter LD individuals nevertheless can

enjoy impressive outcomes in high school and college (Rawson, 1968; Robinson & Smith, 1962).

Peer Education

Teachers and counselors are not the only individuals in school who can assist the gifted handicapped. Peers can help, too. Instructional options involving the peers of gifted handicapped pupils may be grouped under two headings:

1) teacher-directed instruction of non-handicapped pupils, and
2) interactive learning that occurs between non-handicapped and handicapped peers.

During teacher-directed instruction, educators can dissuade non-handicapped pupils from indulging in too much competition with, or teasing of, the handicapped (Whitmore, Maker, & Knott, 1985). In addition, educators effectively might show films to normal students about the handicapped, in order to build more positive attitudes toward handicapped classmates. Films about the physically handicapped might be particularly successful in improving normal peer attitudes toward the disabled (Rizzi, 1984).

In dealing with non-handicapped children who are gifted, teachers can arrange for these pupils to study about the lives of prominent bright handicapped people (Holland, 1985). They also can educate young gifted students about the nature of handicaps (Mays, 1978). Educators' efforts in these types of instruction may be facilitated by the positive attitudes shown under some circumstances by non-disabled gifted pupils toward the handicapped (Miller, Richey, & Lammers, 1983).

With regard to interactive learning between gifted handicapped and non-handicapped classmates, Davis and Rimm, (1985) have noted that various activities can be organized to improve intergroup relationships:

- discussion groups;
- cooperative learning groups;
- sensitivity training;
- values clarification;
- tutoring between gifted and gifted handicapped students;
- tutoring between gifted handicapped and younger pupils.

Community Efforts

Programming efforts on behalf of high-potential handicapped pupils can reach effectively beyond the school. The community in general and medicine, higher education, and advocacy organizations in particular can play an important role in aiding high-potential handicapped persons.

The community as a whole needs to be aware of the existence of such individuals. It also must come to grips with particular misconceptions, such as the "awful" life that the blind must live.

Doctors must be circumspect in dealing with gifted handicapped children throughout their development (Whitmore & Maker, 1985). Physicians can help parents by giving them accurate and complete information at birth regarding their youngsters' apparent weaknesses and strengths. And doctors should be wary of giving these children drugs later on, as part of an effort to improve these youngsters' academic results and social conduct. While some youngsters may react positively to appropriate medications (Morgan, 1988), the potential for ineffective or inappropriate drug use does exist (Whitmore & Maker, 1985).

Higher education should realize the extent of the difficulty it now has with gifted handicapped students, and should aid them with specific action on four fronts:

- progressive admissions policies;
- on-campus support services;
- appropriate learning materials;
- mentorships and peer assistance.

Currently, some colleges may be insensitive in all of these areas. First, some college administrators may not permit gifted handicapped students to use alternative tests or alternate administrative methods for admission. Second, some college personnel may be unsupportive toward those high-potential handicapped pupils who are admitted. Many professors, for example, may hold distinctly negative expectations toward LD college students, despite the apparently substantial number of such individuals (Hallahan & Kauffman, 1986; Minner & Prater, 1984). Third, some typical college learning materials may seem incomprehensible to high-potential handicapped students. And fourth, there may be no mentors or peers available to help the gifted handicapped cope with their new surroundings.

Many institutions of higher education already have begun to proceed along more helpful lines. Admissions policies and on-campus support to handicapped students greatly increase the likelihood of their success. Some colleges and universities work to raise faculty sensitivity to the needs of the handicapped, provide testing to students desiring a learning-abilities assessment, and offers interested students a variety of assistance on academic and social matters (LNEC Update, 1988).

Progressive universities may offer aid to handicapped students with readings in Braille, audiotapes of texts, and other special materials. Some colleges may pair high-potential handicapped pupils with experienced students, in order to assist the gifted handicapped with social coping. Students who

themselves are handicapped may be among the most effective persons in rendering assistance. In fact, C. F. Johnson (1980) reported on 30 LD adults who rated other LD persons as their best source of help.

Active advocacy organizations (like the National Association of the Deaf and the Association for Children and Adults with Learning Disabilities) can be helpful in several ways in presenting the cause of the gifted handicapped to the community. Such agencies aim to:

1) provide information on the abilities and needs of high-potential handicapped people,
2) serve as advocates for constructive action by the gifted handicapped, and
3) act as a vehicle for attracting government support to this population (Jacobs, 1983).

Parental Involvement

Outside the school, parents would seem to be the most influential individuals to nurture the strengths of gifted handicapped children. Certainly, the crucial role of parents in nurturing the strengths of the gifted in general has been documented throughout various historical eras (Olszewski, Julieke, Buescher, 1987; Walberg, Rasher, & Parkerson, 1979). Four categories of suggestions for parents of gifted handicapped youngsters can help them to assist their children:

1) helpful attitudes which parents can hold,
2) constructive methods by which parents can deal with their youngsters' conduct,
3) helpful techniques by which parents can assist their children's acquisition of scholastic skills, and
4) positive approach toward building relationships with school personnel.

Parental Attitudes

Bricklin (1983) indicates that parents of gifted handicapped youngsters need to understand the stages which they (the parents) may be going through in dealing with their children's behavior. Therapeutic discussions have indicated that parents may go through such phases as "denial," "resentment," and "anger and blame" in relation to their child's difficulties (Bricklin, 1983). These feelings become compounded with parental awareness of the unusual strengths, abilities, and talents which the child

also demonstrates. According to Bricklin, parents progressing toward a realistic acceptance of their youngster as "gifted handicapped" can deal with their child successfully if they:

- communicate that the youngster is important;
- cherish the whole child;
- value the youngster's unique qualities.

Conduct Management by Parents

As parents deal specifically with gifted handicapped children's conduct, the writings of Gallagher (1983) offer some helpful guidelines:

- remind the child of a required task a minimum of times to avoid increasing dependence;
- remember that pleasurable outcomes usually increase a youngster's cooperation and compliance;
- develop a general atmosphere of pleasantness, joy, and humor.

Davis and Rimm (1985) offer other helpful behavior-management suggestions:

- Do not "counteridentify" with the child, defining parental success or failure in terms of the youngster's accomplishments;
- do not let the child manipulate situations;
- do not let one parent handle the overwhelming bulk of assistance with the youngster's school work.

Instruction by Parents in School-Related Skills

Parents often seek and receive suggestions from experts on conduct management in the home. They also play a significant role in the development of academic skills. Woltman (1985) provides overall findings about the family structure from which the gifted handicapped youngster tends to come:

- a successful and goal-oriented unit that regards the child's handicap as an impairment that can be overcome;
- an environment that also provides that youngster with many experiences.

Whitmore, Maker, and Knott (1985) add that the parents of the gifted handicapped person may divert time and resources from other endeavors so that this individual may achieve.

Whitmore and Maker (1985) offer specific suggestions for parents of handicapped gifted youngsters. For preschool children, parents can:

- remove physical obstructions in the home;
- encourage children's movement in the larger environment;
- encourage a range of sensory experiences with objects.

For elementary and secondary students, parents might remember these four pieces of specific advice:

- children's failure in apparently simple tasks does not constitute a lack of intelligence;
- youngsters' weaknesses should be approached as challenges in problem solving;
- specific comments should be provided to teachers on children's strengths and weaknesses;
- handicapped and non-disabled siblings should not be compared inappropriately.

Parents of older children also can teach compensatory strategies to ameliorate these youngsters' academic weaknesses (Maker et al., 1978).

Recommendations Regarding Parent-School Relationship

In dealing with school personnel, experts provide a variety of warnings and suggestions. Greer and Galtelli (1983) warn that parents should not think that professionals are all-knowing, stupid, arrogant, or concerned only superficially with the child. Karnes, Shwedel, and Lewis (1983) encourage parents to hold a more constructive philosophy, advocating that parents maintain a consistent involvement in their children's education. This latter group of authors suggests that parents might attend group meetings on the gifted handicapped generally and conferences regarding their children specifically, and read from available libraries dealing with gifted and handicapped children.

In working with teachers, parents might consider the specific suggestions made in Table 10.

TABLE 10 ***PRACTICAL IDEAS FOR BUILDING A PARENT-TEACHER PARTNERSHIP FOR THE GIFTED HANDICAPPED CHILD***

- *Share knowledge about the interests, strengths, and weaknesses of the child.*
- *Develop goals for the child that remain flexible.*
- *Encourage a variety of challenging learning experiences.*
- *Build an interesting home/school educational program that encourages student independence.*
- *Maintain a flexible perspective on ways to meet the needs of the child.*
- *Maintain frequent and open communications.*
- *Seek out peers, role models, and mentors for the child*

RESEARCH NEEDS CONCERNING THE GIFTED HANDICAPPED

In concluding this handbook, it appears that important facts recently have been learned about the gifted handicapped, but much more must be learned. While we could compile a lengthy list of research needs concerning these pupils, it is possible to single out a few of these requirements here.

First, in order to meet the needs of gifted handicapped students most effectively, we probably must obtain an initial "baseline reading" on our current approaches to these pupils. That is, we need to know more precisely how effective we are at providing for high-potential handicapped students with today's most commonly employed definitions, identification methods, and programming techniques.

Beyond this rudimentary research starting point, the work of Whitmore and Maker (1985), broadly interpreted, suggests four other salient lines of investigation. First, from the broad range of viable (though sometimes little used) approaches that appear in the literature, we must learn the most effective ways of identifying the strengths of gifted handicapped pupils. Second, once gifted groups with particular disabilities are identified, we need to follow them through their entire school careers, rather than just continue the "after-the-fact" or individual-case-study research that so far has marked the field. Third, as gifted handicapped pupils advance through their school years, we must implement and evaluate various educational

approaches, including the promising multidisciplinary educational approach. And fourth, we must implement and investigate programming that involves important non-educators, including the peers, parents, and community of the gifted handicapped. Information on these research topics should improve significantly our knowledge and treatment of high-potential handicapped students.

REFERENCES

Baker, H. (1970). Biographical sagas of willpower. New York: Vantage Press.

Baldwin, L. J., & Gargiulo, D. A. (1983). A model program for elementary-age learning-disabled/gifted youngsters. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Barksdale, L. S. (1972). Self-esteem evaluation. Idyllwild, CA: Barksdale Foundation. (rating scale)

Barraga, N. C. (1964). Increased visual behavior in low vision children. New York: American Foundation for the Blind.

Bateman, B. (1963). Reading and psycholinguistic processes of partially seeing children (CEC Research Monograph, Series A, No. 5). Arlington, VA: Council for Exceptional Children.

Baum, S. (1988). An enrichment program for gifted learning disabled students. Gifted Child Quarterly, 32(1), 226-230.

Baum, S., & Kirschenbaum, R. (1984, Winter). Recognizing special talents in learning disabled students. Teaching Exceptional Children, 92-98.

Bazakas, R. (1977). The interpersonal impact of coping, dependency, and denial self-presentations by the disabled. Unpublished doctoral dissertation, New York University.

Becker, G. G. (1980). The effectiveness of inservice training using simulation videotape and participatory lecture in changing attitudes and increasing diagnostic abilities of elementary teachers involved in mainstreaming. Dissertation Abstract International, 40, 11A.

Birch, J. W. (1984). Is any identification procedure necessary? Gifted Child Quarterly, 28(4), 157-161.

Blandford, B. J., & Lloyd, J. W. (1987). Effects of a self-instructional procedure on handwriting. Journal of Learning Disabilities, 20(6), 342-346.

Block, G. H. (1980). Dyscalculia and the minicalculator: The ALP program. Academic Therapy, 16, 175-181.

Bradley, E., & Newhouse, R. (1975). Sociometric choice and self-perceptions of upper elementary school children. Psychology in the Schools, 12, 217-222.

Bricklin, P. M. (1983). Working with parents of learning-disabled/gifted children. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Brown, D. (1983). The handicap that had no name. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Brown, S. (1984). The use of WISC-R subtest scatter in the identification of intellectually gifted handicapped children: An inappropriate task? Roeper Review, 7 (1), 20-23.

Burks, B. S., Jensen, D. W., & Terman, L. M. (1930). Genetic studies of genius: The promise of youth (Follow-up studies of 1000 gifted children). Stanford, CA: Stanford University Press.

Caton, H. R. (1981). Visual impairments. In A. E. Blackhurst & W. H. Berdine (Eds.), An introduction to special education. Boston: Little, Brown.

Centra, J.A. (1986). Handicapped student performance on the Scholastic Aptitude Test. Journal of Learning Disabilities, 19(6), 324-327.

Chapman, J. W., & Boersma, F. J. (1979). Academic self-concept in elementary learning disabled children: A study with the student's perception of ability scale. Psychology in the Schools, 16 (2), 201-206.

Charles, C. M. (1976). Individualizing instruction. St. Louis: C. V. Mosby.

Chermak, G. D., & Burgerud, D. M. (1983). Receptive language of gifted and learning disabled-gifted children. Exceptional Child, 30(3), 226-29.

Ciha, T. E., Harris, R., Hoffman, C., & Potter M. (1974). Parents as identifiers of giftedness, ignored but accurate. Gifted Child Quarterly, 18, 191-195.

Clark, B. (1979). Growing up gifted. Columbus, OH: Merrill.

Clary, L. M. (1984). Identifying metacognitive social skills in young adults. Paper presented at the Annual Convention of the Association for Children and Adults with Learning Disabilities, New Orleans, LA. ERIC Document Reproduction Service No. 249 705.

Cohen, M. W. (1986). Intrinsic motivation in the special education classroom. Journal of Learning Disabilities, 19(5), 258-261.

Coleman, Z. (1983). Loss of hearing: Coping with a new reality. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Cordoni, B. R., O'Donnell, J. P., Rananiah, N. V., Kurtz, J., & Rosenshein, K. (1981). Wechsler Adult Intelligence Score Patterns for Learning Disabled Young Adults. Journal of Learning Disabilities, 14(7), 404-409.

Dale, P. S., & Cole, K. N. (1988). Comparison of academic and cognitive programs for young handicapped children. Exceptional Children, 54(5), 439-448

Daniels, P. R. (1983). Teaching the learning-disabled/gifted child. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Davis, G. A., & Rimm, S. B. (1980). GIFFI II: Group inventory for finding interests. Watertown, WI: Educational Assessment Service.

Davis, G. A., & Rimm, S. B. (1982). Group inventory for finding interests (GIFFI) I and II: Instruments for identifying creative potential in the junior and senior high school. Journal of Creative Behavior, 16, 50-57.

Davis, G. A., & Rimm, S. B. (1985). Education of the gifted and talented. Englewood Cliffs, NJ: Prentice-Hall.

Deshler, D. D., Warner, M. M., Schumaker, J. B., & Alley, G. R. (1983). Learning strategies intervention model: Key components and current status. In J. D. McKinney & Lynne Feagans (Eds.), Current topics in learning disabilities. Norwood, NJ: Ablex Publishing Company.

Eisenberg, D., & Epstein, E. (1981). The discovery and development of giftedness in handicapped children. Paper presented at CEC-TAG National Topical Conference on the Gifted and Talented Child, Orlando, FL.

Elkind, J. (1973). The gifted child with learning disabilities. Gifted Child Quarterly, 17, 45-67.

Elrod, G. F., & Ryckman, D. B. (1984). An examination of WISC-R profiles of learning disabled children. Educational and Psychological Research, 4(4), 185-93.

Federal Register. (1977, August 23). Definitions of handicapped children. Washington, DC: U.S. Dept. of Health, Education, and Welfare.

Feldhusen, J. F., & Hoover, S. M. (1986). A conception of giftedness: Intelligence, self-concept and motivation. Roeper Review, 8(3), 140-142.

Feldman, D. (1979). Toward a nonelistist conception of giftedness. Phi Delta Kappan, 60, 660-663.

Felker, D. W. (1973). Building positive self-concepts. Minneapolis: Burgess Publishing.

Fortner, V. L. (1986). Generalization of creative productive-thinking training to LD students' written expression. Learning Disability Quarterly, 9(4), 274-284.

Fox, L. H., & Brody, L. (1983). Models for identifying giftedness: Issues related to the learning-disabled child. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Fox, L. H., Brody, L., & Tobin, D. (1983). Introduction. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Fox, L. H., Tobin, D., & Schiffman, G. B. (1983). Adaptive methods and techniques for learning-disabled gifted children. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Gallagher, J. J. (1983). The adaptation of gifted programming for learned-disabled students. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Gallagher, J. J., & Weiss, P. (1979). The education of gifted and talented students: A history and prospectus. Washington, DC: Council for Basic Education.

Gartner, J. (1985). Chapter reaction (to "Gifted adults incurring severe disabilities"). In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Gerken, K. (1979). An unseen minority: Handicapped individuals who are gifted and talented. In N. Colangelo & R. T. Zaffron (Eds.), New voices in counseling the gifted. Dubuque, IA: Kendall/Hunt.

Gersten, R., Carnine, D., & Woodward, J. (1987). Direct instruction research: The third decade. Remedial and Special Education, 8(6), 48-56.

Glass, R. M., & Meckler, R. S. (1972). Preparing elementary teachers to instruct mildly handicapped children in regular classrooms: A summer workshop. Exceptional Children, 39, 152-156.

Goertzel, V. H., & Goertzel, M. G. (1962). Cradles of eminence. Boston: Little, Brown.

Gottfredson, L. S., Finucci, J. M., & Childs, B. (1984). Explaining the adult careers of dyslexic boys: Variations in critical skills for high-level jobs. Journal of Vocational Behavior, 24, 355-373.

Greer, B. G., & Galtelli, B. (1983). Parents and professionals: Irrational assumptions in their communications. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Gronlund, N. E. (1959). Sociometry in the classroom. New York: Harper & Row.

Hallahan, D. P., & Kauffman, J. M. (1986). Exceptional children: Introduction to special education (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hallahan, D. P., Lloyd, J., Kosiewicz, M. M., Kauffman, J. M., & Graves, A. W. (1979). Self-monitoring of attention as a treatment for a learning disabled boy's off-task behavior. Learning Disability Quarterly, 2, 24-32.

Hanson, I. (1984). A comparison between parent identification of young bright children and subsequent testing. Roeper Review, 7(1), 44-45.

Haring, N. G. (1956). A study of classroom teachers' attitudes toward exceptional children. Dissertation Abstracts, 17, 103-104.

Harrington, R. G. (1982). Caution: Standardized testing may be hazardous to the educational programs of intellectually gifted children. Education, 103(2), 112-117.

Harris, D., & Avery, S. (1978). Gift behind the difficulties. Pointer, 23, 65-68.

Harris, A. R., Graham, S., & Freeman, S. (1988). Effects of strategy training on metamemory among learning disabled students. Exceptional Children, 54(5), 332-338.

Hendricks, I., & Sloan, C. A. (1981). A study of the impact of an inservice program on the concerns and needs of secondary teachers toward mainstreaming. ERIC Document Reproduction Service No. ED 243 265.

Hickok, L. A. (1958). The story of Helen Keller. New York: Grosset.

Hofmann, S. (1983). Plunged into the mainstream. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Holland, B. W. (1985, January-February). Helen Keller: The miracle. G/C/T, 36, 12-13.

Iverson, M. J., & Davis, P. D. (1981). Effects of inservice education methods on improving the attitudes of vocational agriculture teachers toward physically handicapped students. Journal of Vocational Education Research, 6(1), 1-16.

Jacobs, L. M. (1983). The deaf: Handicapped by public ignorance. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Jacobson, V. (1984). The gifted learning disabled. ERIC Document Reproduction Service No. ED 254 988.

Jamieson, J. D. (1984). Attitudes of educators toward the handicapped. In R. L. Jones (Ed.), Attitudes and attitude change in special education: Theory and practice. Reston, VA: Council for Exceptional Children.

Jensema, C. (1975). The relationship between academic achievement and the demographic characteristics of hearing impaired children and youth. Washington, DC: Gallaudet College, Office of Demographic Studies.

Jernigan, K. (1983). Blindness: Disability or nuisance? In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Johnson, C. F. (1980). The Arkansas Committee for LD adults: Another dimension. Paper presented at the Annual Meeting of the Association for Children with Learning Disabilities. ERIC Document Reproduction Service No. ED 197 564.

Johnson, D. W., & Johnson, R. T. (1984). Classroom learning structure and attitudes toward handicapped students in mainstream settings: A theoretical model and research evidence. In R. L. Jones (Ed.), Attitudes and attitude change in special education: Theory and practice. Reston, VA: Council for Exceptional Children.

Karnes, M. (1979). Young handicapped children can be gifted and talented. Journal for the Education of the Gifted, 2(3), 157-172.

Karnes, F. A., & Collins, E. C. (1978). State definitions on the gifted and talented: A report and analysis. Journal for the Education of the Gifted, 1, 44-62.

Karnes, M., Shwedel, A. M., & Lewis, G. F. (1983). Long-term effects of early programming for the gifted/ talented handicapped. Journal for the Education of the Gifted, 6(4), 266-278.

Kauffman, D. J. (1977). Effects of contact and instruction on regular classroom teachers' attitudes toward the mentally retarded. Dissertation Abstracts International, 38(2A), 729.

Kaufman, A. S., & Harrison, P. L. (1986). Intelligence tests and gifted assessment: What are the positives? Roeper Review, 8(3), 154-160.

Kent State University College of Education. (1988, Jan.). Excellence in the making: Effective and innovative instruction for underserved gifted students. Kent, OH: Author. (brochure)

Klein, P. S. (1980). The overlooked or misused talents of learning disabled children. Creative Child and Adult Quarterly, 5(1), 30-34.

Kranz, B. (1981). Kranz Talent Identification Instrument. Moorhead, MN: Moorhead State College.

LaBenne, W. W., & Green, B. I. (1969). Educational implications of self-concept theory. Pacific Palisades, CA: Goodyear Publishing Company.

Lattin, D. (1983). Orthopedically disabled: Determination on wheels. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Lerman, A., & Guilfoyle, G. (1970). The development of pre-vocational behavior in deaf adolescents. New York: Teachers College Press.

Leroux, J. A. (1988). Voices from the classroom: Academic and social self-concepts of gifted adolescents. Journal for the Education, 21(3), 3-18.

Lewis, M. E. B., & Daniels, P. R. (1983). Teacher training in the clinical method for learning-disabled/ gifted children. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Lloyd, J., Epstein, M. H., & Cullinan, D. (1981). Direct teaching for learning disabilities. In J. Gottlieb & S. S. Strichart (Eds.), Developmental theory and research in learning disabilities. Baltimore, MD: University Park Press.

LNEC Update. (1988). Charlottesville, VA: University of Virginia Learning Needs Evaluation Center. (fact sheet)

Maker, C. J. (1977). Providing programs for the gifted handicapped. Reston, VA: Council for Exceptional Children.

Maker, C. J., Morris, E., & James, J. (1981). The Eugene Field Project: A program for potentially gifted young children. In Balancing the scale for the disadvantaged gifted. Los Angeles, CA: National/State Leadership Training Institute on the Gifted and the Talented.

Maker, C. J., Redden, M. R., Tonelson, S., & Howell, R. M. (1978). The self-perceptions of successful handicapped scientists. Albuquerque, NM: University of New Mexico, The Department of Special Education.

Mays, J. (1978, March-April). Teaching young gifted children about handicaps. G/C/T, 1(2), 13-15, 23, 34.

Meisgeier, C., Meisgeier, C., & Werblo, D. (1978). Factors compounding the handicapping of some gifted children. Gifted Child Quarterly, 12(3), 325-331.

Melichar, J. F. (1975). ISARE (Vol. 1-7). San Mateo, CA: Adaptive Systems Corporation.

Melichar, J. F. (1978). ISARE, a description. AAESPH Review, 3, 259-268.

Miller, M., Richey, D. D., & Lammers, K. A. (1983). Analysis of gifted students' attitudes toward the handicapped. Journal for Special Educators, 19(3), 14-21.

Minner, S., & Prater, G. (1984). College teachers' expectations of LD students. Academic Therapy, 20(2), 225-229.

Morgan, B. (1988, May 6). Gifted learning-disabled and attention deficit disorders. Presentation at West Virginia TAG-DLD Symposium on Gifted Learning-Disabled, South Charleston, WV.

Newland, T. E. (1979). The gifted in socio-educational perspective. Englewood Cliffs, NJ: Prentice-Hall.

Nielsen, L. (1979). An in-service program for secondary learning disabilities teachers. Journal of Learning Disabilities, 12(6), 423-427.

Olszewski, P., Kulieke, M., & Buescher, T. (1987). The influence of the family environment on the development of talent: A literature review. Journal for the Education of the Gifted, 11(1), 6-28.

Paris, S. G., & Oka, E. R. (1986). Self-regulated learning among exceptional children. Exceptional Children, 53(2), 103-108.

Parnes, S. J. (1966). Programming creative behavior. Buffalo: State University of New York at Buffalo.

Parnes, S. J. (1975). Aha! Insights into creative behavior. Buffalo: D.O.K. Publishers.

Patten, B. (1973). Visually mediated thinking: A report on the case of Albert Einstein. Journal of Learning Disabilities, 6, 415-420.

Pegnato, C. W., & Birch, J. W. (1959). Locating gifted children in junior high schools: A comparison of methods. Exceptional Children, 25, 300-304.

Porter, R. M. (1982). The gifted handicapped: A status report. Roeper Review, 4(3), 24-25.

Public Law 94-142. (1975). The Education of All Handicapped Children Act.

Public Law 95-561. (1978). Title IX-A: Gifted and Talented Children's Education Act of 1978.

Purkey, W. W. (1970). Self-concept and school achievement. Englewood Cliffs, NJ: Prentice-Hall.

Rack, L. (1981). Developmental dyslexia and literary creativity in the area of deficit. Journal of Learning Disabilities, 14, 262-263.

Rawson, M. (1968). Adult accomplishment of dyslexic boys. Baltimore: Johns Hopkins.

Regulations and administrative requirements for the operation of special education programs. (1978, June 23). Richmond, VA: Department of Education, Division of Special Education Support Services.

Regulations governing the educational program for gifted students. (1986, May). Richmond, VA: Virginia Department of Education.

Reeve, R. A., & Brown, A. L. (1985). Metacognition reconsidered: Implications for intervention research. Journal of Abnormal Child Psychology, 13, 343-356.

Reid, B. W. (1984). Attitudes toward the learning disabled in school and home. In R. L. Jones (Ed.), Attitudes and attitude change in special education: Theory and practice. Reston, VA: Council for Exceptional Children.

Renzulli, J. S. (1983, September/October). Rating the behavioral characteristics of superior students. G/C/T, 30-35.

Renzulli, J. S., Reis, S. M., & Smith, L. H. (1981). The revolving door identification model. Mansfield, CT: Creative Learning Press.

Renzulli, J. S., & Smith, L. H. (1979). A guidebook for developing Individualized Education Programs (IEPs) for gifted and talented students. Mansfield, CT: Creative Learning Press.

Richards, J. (1981). It's all right if kids can't read. Journal of Learning Disabilities, 14, 62-67.

Rimm, S. B. (1980b). GIFT (Group Inventory for Finding Creative Talent): Manual for Administration. Watertown, WI: Educational Assessment Service.

Rimm, S. B. (1980b). GIFT (Group Inventory for Finding Creative Talent): Primary, Elementary, and Upper Elementary Levels. Watertown, WI: Educational Assessment Service.

Rimm, S. B. (1983a). PRIDE: Preschool and Kindergarten Interest Descriptor. Watertown, WI: Educational Assessment Service.

Rimm, S. B. (1983b). PRIDE (Preschool and Kindergarten Interest Descriptor): Manual for administration. Watertown, WI: Educational Assessment Service.

Rimm, S. B. (1984). The characteristics approach: Identification and beyond. Gifted Child Quarterly, 28(4), 181-187.

Rizzi, D. (1984). Attitude change toward the physically handicapped through the use of film. ERIC Document Reproduction Service No. ED 262 537.

Robertson, J. (1985). Adults incurring severe disabilities. In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Robinson, H. M., & Smith, H. K. (1962). Reading clinic clients--Ten years after. Elementary School Journal, 63, 22-27.

Rosner, S. L., & Seymour, J. (1983). The gifted child with a learning disability: Clinical evidence. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Sarfaty, L., & Katz, S. (1978). The self-concept and adjustment patterns of hearing-impaired pupils in different school settings. American Annals of the Deaf, 123(4), 438-441.

Savage, L. (1988, May 6). Learning disabled/gifted: An identification matrix. Presentation at West Virginia TAG-DLD Symposium on Gifted Learning-Disabled, South Charleston, WV.

Schein, J. D., & Delk, M. T., Jr. (1974). The deaf population of the United States. Silver Spring, MD: National Association of the Deaf.

Schiff, M. M., Kaufman, A. S., & Kaufman, N. L. (1981). Scatter analysis of WISC-R profiles for learning disabled children with superior intelligence. Journal of Learning Disabilities, 14, 400-404.

Scruggs, T. E., & Mastropieri, M. A. (1986). Improving the test-taking skills of behaviorally disordered and learning disabled children. Exceptional Children, 53(1), 63-68.

Seligman, M. E. (1975). Helplessness: On depression,development, and death. San Francisco: W. E. Freeman.

Semmel, M. I., & Cheney, C. O. (1979). Social acceptance and self-concept of handicapped pupils in mainstreaming environments. Education Unlimited, 1(2), 65-68.

Senf, G. M. (1983). The nature and identification of learning disabilities and their relationship to the gifted child. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

Shaw, M., & Alves, G. (1963). The self-concept of bright academic underachievers. Personal Guidance Journal, 42, 401-403.

Short, E. J., Feagans, L., McKinney, J. D., & Appelbaum, M. I. (1984). Longitudinal stability of LD subtypes based on age- and IQ-achievement discrepancies. Learning Disability Quarterly, 7, 214-225.

Smith, M. D. (1979). Prediction of self-concept among learning disabled children. Journal of Learning Disabilities, 12(10), 664-669.

Taba, H., Durkin, M. C., Fraenkel, J. R., & McNaughton, A. H. (1971). A teacher's handbook to elementary social studies (2nd ed.). Reading, MA: Addison-Wesley.

Terman, L. M., & Oden, M. H. (1925). Genetic studies of genius: Mental and physical traits of a thousand gifted children. Stanford, CA: Stanford University Press.

The University of Virginia and Section 504: A guide to accommodating handicapped students. (1988). Charlottesville, VA: University of Virginia.

Terman, L. M., & Oden, M. H. (1947). Genetic studies of genius: The gifted child grows up. Stanford, CA: Stanford University Press.

Thompson, L. J. (1971). Language disabilities in men of eminence. Journal of Learning Disabilities, 4, 34-45.

Thomson, M. E., & Hartley, G. M. (1980). Self-concept in dyslexic children. Academic Therapy, 16(1), 19-36.

Torgeson, J. K., & Kail, R. V. (1980). Memory processes in exceptional children. In B. K. Keogh (Ed.), Advances in special education, Vol. 1: Basic constructs and theoretical orientations. Greenwich, CT: J.A.I. Press.

Torrance, E. P. (1966). Torrance tests of creative thinking. Bensenville, IL: Scholastic Testing Service.

Torrance, E. P. (1981). Non-test ways of identifying the creatively gifted. In J. C. Gowan, J. Khatena, & E. P. Torrance (Eds.), Creativity: Its educational implications (2nd ed.). Dubuque, IA: Kendall/Hunt.

Udall, A. J. (1985). Chapter reaction (to "Intellectually gifted persons with specific learning disabilities"). In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Udall, A. J., & Maker, C. J. (1983). A pilot program for elementary-age learning-disabled gifted students. In L. H. Fox, L. Brody, & D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming. Baltimore: University Park Press.

University of Virginia Undergraduate Record: 1988-89. (1988). Charlottesville, VA: University of Virginia.

Virginia Plan for the Gifted. (1984). Richmond, VA: Department of Education, Division of Special Education Programs and Pupil Personnel Services.

Virginia School Laws: 1987 Supplement. (1987). Charlottesville, VA: Michie Company.

Vogel, S. A. (1982). On developing LD college programs. Journal of Learning Disabilities, 15, 518-528.

Walberg, H. J., Rasher, D. P., & Parkerson, J. (1979). Childhood and eminence. Journal of Creative Behavior, 13(4), 225-232.

Walker, M. L. (1985). Chapter reaction (to "Gifted adults incurring severe disabilities"). In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Walker, K. (1988, May 7). Presentation and discussion on self-concept of gifted learning-disabled students. West Virginia TAG-DLD Symposium on Gifted Learning Disabled. South Charleston, WV.

Walsh, A. (1956). Self-concepts in bright boys with learning difficulties. Unpublished doctoral dissertation, Teachers College, Columbia University.

Weiner, B., & Sierad, J. (1974). Misattribution for failure and the enhancement of achievement strivings: A preliminary report. In B. Weiner (Ed.), Achievement motivation and attribution theory. Morristown, NJ: General Learning Press.

Wells, D. (1982). Definitions of gifted and talented used in the United States. Journal for the Education of the Gifted, 5(4), 283-294.

West Virginia Association for the Gifted and Division for Learning Disabilities. (1988). Program for May 6-7, 1988 Symposium on Gifted Learning-Disabled. South Charleston, WV.

Whitmore, J. R. (1980). Giftedness, conflict, and underachievement. Boston: Allyn & Bacon.

Whitmore, J. R., & Maker, C. J. (1985). Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Whitmore, J. R., Maker, C. J., & Knott, G. (1985). Intellectual giftedness in persons with specific learning disabilities. In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Williams, J. P. (1986). Teaching children to identify the main idea of expository texts. Exceptional Children, 53(2), 163-168.

Wingenbach, N. (1985). Chapter reaction (to "Intellectually gifted persons with specific learning disabilities"). In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

Winter, M., & DeSimone, D. (1983). I'm a person, not a wheelchair! Problems of disabled adolescents. In R. L. Jones (Ed.), Reflections on growing up disabled. Reston, VA: Council for Exceptional Children.

Winzer, M. (1984). The effect of information on the attitudes of teachers and non-educators toward mainstreaming. B.C. Journal of Special Education, 8(3), 273-282.

Woltman, D. S. (1985). Chapter reaction (to "Hearing impaired gifted persons"). In J. R. Whitmore & C. J. Maker (Eds.), Intellectual giftedness in disabled persons. Rockville, MD: Aspen.

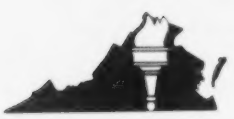
Wong, B. Y. L. (1986). A cognitive approach to teaching spelling. Exceptional Children, 53(2), 169-173.

Wong, B. Y. L., & Jones, W. (1982). Increasing metacomprehension in learning disabled and normally achieving students through self-questioning training. Learning Disability Quarterly, 5, 228-240.

Ysseldyke, J. E., Algozzine, B., Richey, L., & Graden, J. (1982). Declaring students available for learning disability services: Why bother with the data? Learning Disability Quarterly, 5, 37-44.

Ysseldyke, J. E., Algozzine, B., Shinn, M. R., & McGue, M. (1982). Similarities and differences between low achievers and students classified learning disabled. Journal of Special Education, 16, 73-85.

Zettel, J. J. (1979). Gifted and talented education over a half decade of change. Journal for the Education of the Gifted, 3(1), 14-37.



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